Micrometer Calipers

21 Sizes and 89 Varieties

Catalog No. 12

J. T. SLOCOMB CO.

MANUFACTURERS OF

MACHINISTS' TOOLS

PROVIDENCE, RHODE ISLAND,
U. S. A.

TO OUR PATRONS

Stock

THE TOOLS shown in this Catalog are usually in stock, and can be sent immediately. In case any tool called for is not in stock and a delay, we shall notify the customer when it will be shipped.

Quality

WE INSIST that every tool shall be thoroughly good for the purpose for which it is intended. We shall be glad to have our attention called to any defect, and will make all such good.

Ordering

IN ORDERING, be careful to use the number or size of tool wanted.
In case of Center Drills, use letters for size.

Shipping

WE DO NOT pay express or postal charges on goods sent to dealers, but deliver them F.O.B. Providence, R. I.
Unless otherwise ordered, we shall ship cheapest way; if by mail shall charge postage in the invoice. Goods sent by mail are at the purchaser's risk.
When goods are ordered to be sent by express C.O.D., 20 per cent. of the amount must accompany the order, and the express charge for return money will be added. Cash with order will save this extra expense.

Telegraphing

WHEN TELEGRAPHING US, use the Western Union Telegraph Code.
Our Code Address: "Micrometer, Providence."

J. T. SLOCOMB CO

CATALOG

AND PRICE LIST

OF

MACHINISTS' TOOLS

MANUFACTURED BY

J. T. SLOCOMB CO.

PROVIDENCE, RHODE ISLAND

U. S. A.

Introductory

WE take pleasure in presenting this New Catalog to our customers and friends.

Our business was established in 1891, by J. T. Slocomb and C. E Barlow. It has steadily increased in volume, and we have been constantly engaged in improving the quality of our output. We are now located in our new fireproof factory building where there is small liability of interruption.

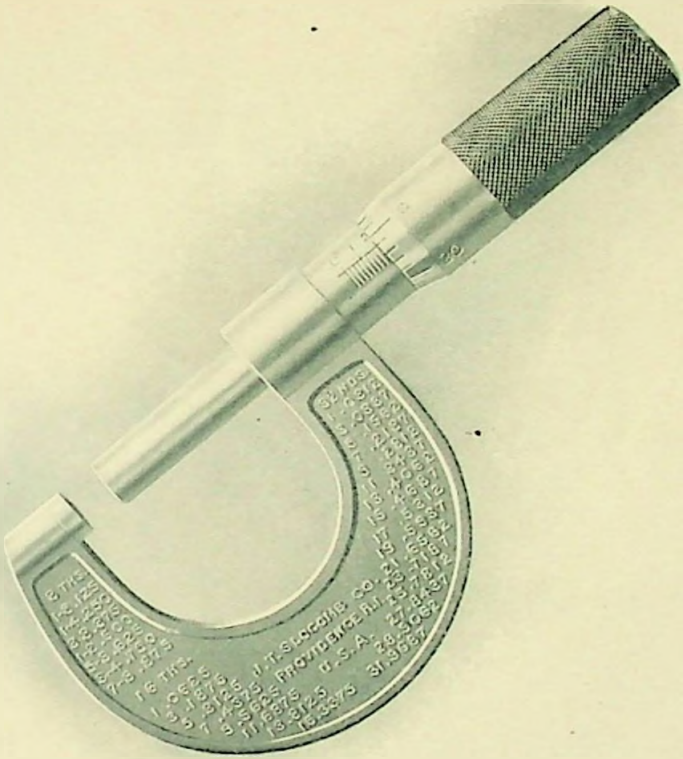
We have worked hard for, and have been successful in attaining a reputation for first-class work at moderate prices.

OUR LINE OF

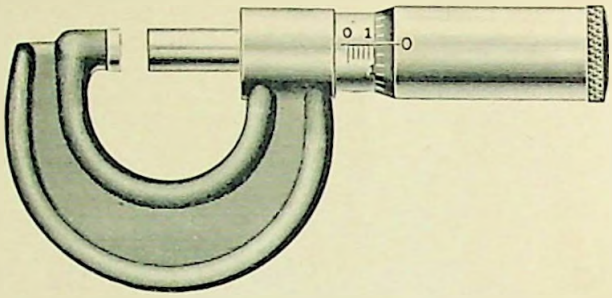
MICROMETER CALIPERS

were designed especially for machine-shop service, and we unhesitatingly say, that there are no others on the market that can approach them for this service.

OUR AIM IS TO ALWAYS KEEP AT THE HEAD OF THE PROCESSION



Anybody can measure fairly accurate with a micrometer. RAPID and ACCURATE work is attained only by practice.



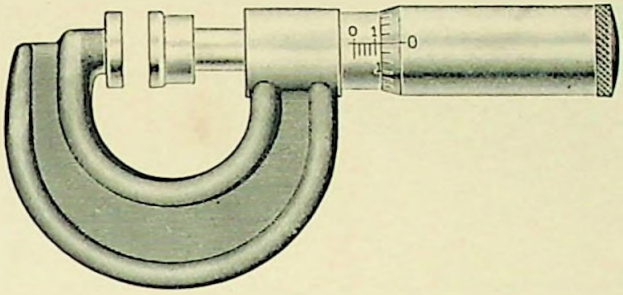
Micrometer Caliper No. 22

ONE-HALF INCH

This Caliper is shown full size in the cut. It measures all sizes from 0 to 1-2 in., by thousandths of an inch.

It is particularly adapted for a pocket tool, on account of its light weight (only 1 3-4 oz.) The frame is finished in black enamel.

Price - $3.00



Micrometer Caliper No. 24

PAPER

This Caliper is intended for measuring paper or other soft material.

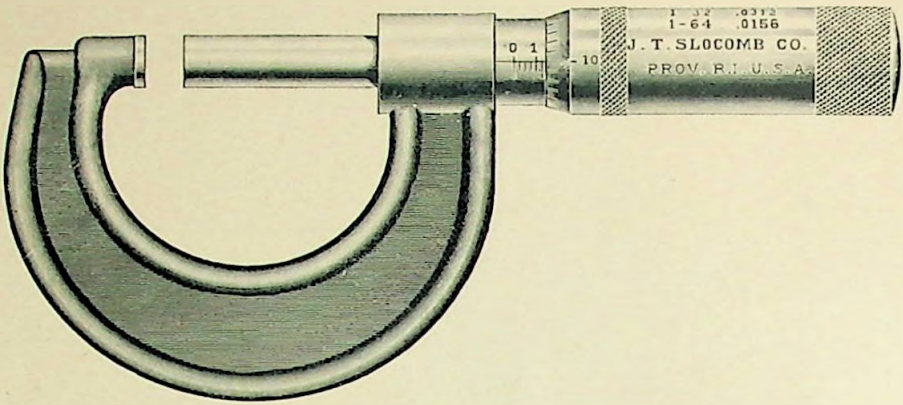
It is shown full size in the cut.

The frame is finished in black enamel.

It measures all sizes by thousandths to .350.

A new feature in this Caliper is a removable cap on spindle. This cap is hardened steel, is held in place by small screw passing through, and is fitted somewhat loosely to spindle so that it can conform to irregular surface of work.

Price - $4.00



Micrometer Caliper No. 25

ONE INCH

This Caliper is shown full size in the cut. It measures all sizes from 0 to 1 in., by thousandths of an inch.

It is finished in black enamel only. Either English or Metric measure.

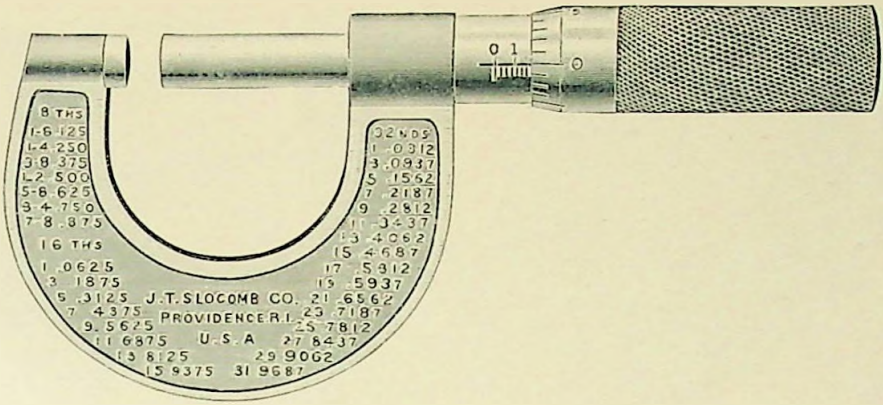
Price - - - - - - - $3.50

With new Friction Stop 4.00

NEW FRICTION STOP

This device can be furnished on any of our Micrometer Calipers. It is shown full size in the cut. It operates by friction, is very smooth in its action and no click. Its working parts are not liable to injury and does not require lubrication. It drives positively backward, but forward slips when a certain pressure is applied.

Applied to any of our Micrometers. Price - 50 cents



Micrometer Caliper No. 26

ONE INCH

This Caliper differs from No. 25 only in the finish and tables on the frame, and in the long knurl thimble.

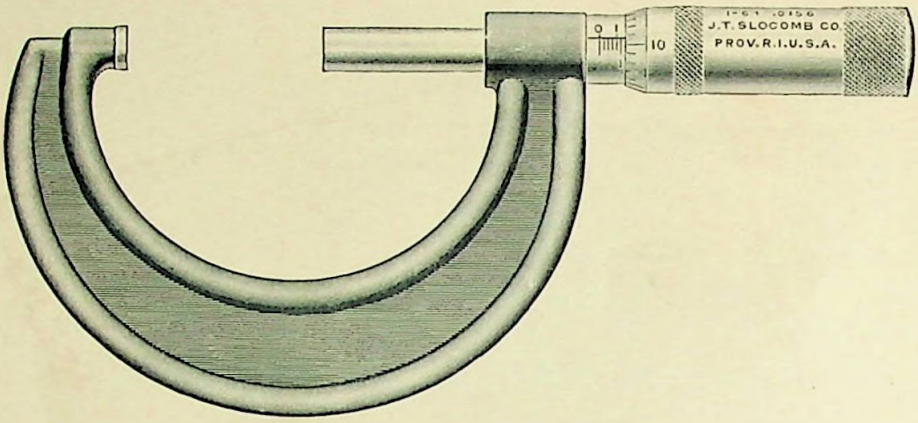
The drop forged frames are first nicely polished, then pressed in polished dies, under a hydraulic pressure of 300 tons.

The figures and ribs about the edges are nicely raised, making a surface that is almost a knurl, and is a good finger hold, besides the pressing stiffens the frame materially.

Price - - - - - - - $4.50

With new Friction Stop 5.00

Don't adjust your micrometer to size and use like a solid gauge.



Micrometer Caliper No. 27

TWO INCH

This Caliper is shown reduced in the cut. It measures all sizes from 1 in. to 2 in., by thousandths of an inch.

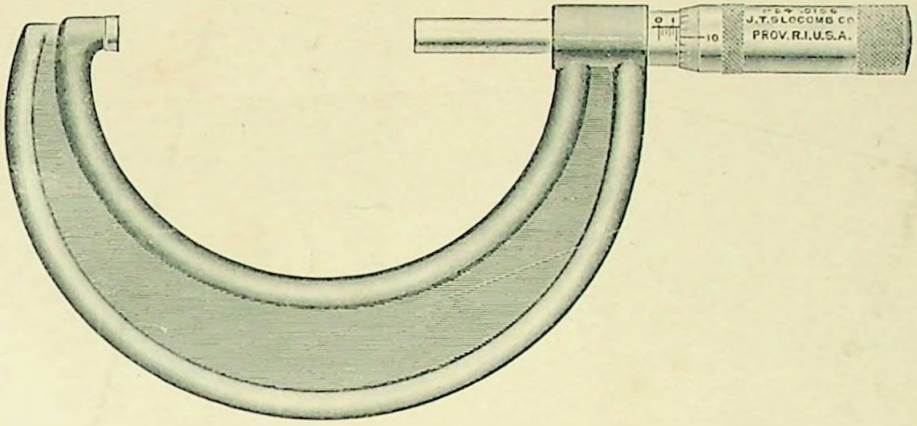
The head and measuring screw is the same as in the 1 inch size.

The frame is finished in black enamel only. Either English or Metric Measure.

Price - - - - - - - $3.50

With new Friction Stop 4.00

It is more comprehensive to know that a piece of work is a certain number of thousandths too large than merely to know it is large.



Micrometer Caliper No. 28

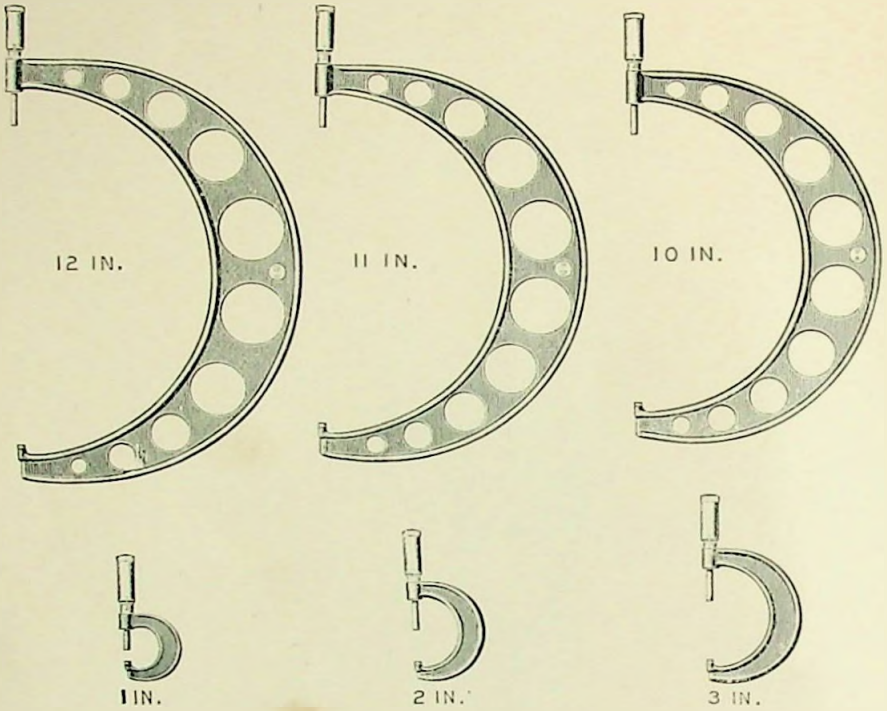
THREE INCH

This Caliper measures all sizes between 2 in. and 3 in., by thousandths of an inch.

The head and measuring screw is the same as in the 1 inch size.

The frame is finished in black enamel only. Either English or Metric Measure.

Price - - - - - - $5.00
With new Friction Stop, 5.50



Micrometer Calipers from 1 to 12 Inches

The cuts on this and following page show our line of sizes from 1 inch to 12 inches.

The frames from 1 in. to 6 in., inclusive, are drop forged of bar steel, and those from 7 in. to 12 in. are steel castings, with holes through for lightness.

The heads and measuring screws are the same on all. Each tool has a range of screw of 1 inch only.

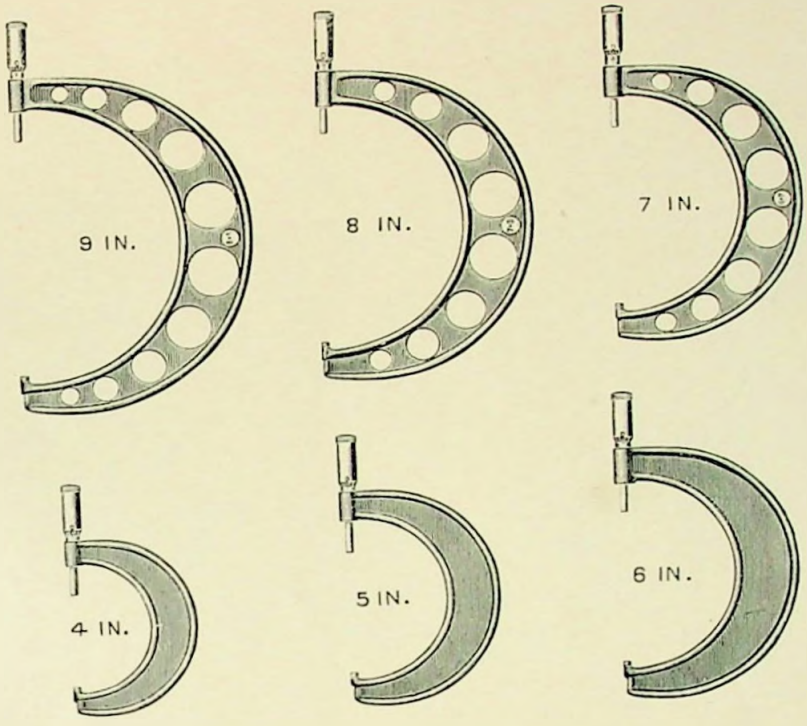
The size given is the maximum, the minimum being 1 inch less in every case.

They may be ordered by the size in inches printed on the cuts.

Frames are finished in black enamel only.

Either in English or Metric Measure.

For prices see following page.

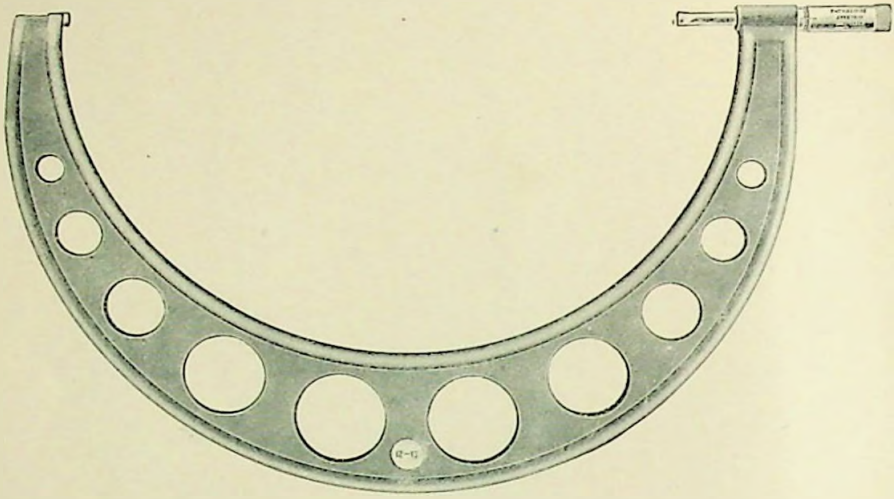


Micrometer Calipers from 1 to 12 Inches

PRICE LIST

Price of	1 in.	enameled	frame,	$3.50
"	2 in.	"	"	3.50
"	3 in.	"	"	5.00
"	4 in.	"	"	5.50
"	5 in.	"	"	6.00
"	6 in.	"	"	6.50
"	7 in.	"	"	6.75
"	8 in.	"	"	7.00
"	9 in.	"	"	7.25
"	10 in.	"	"	7.50
"	11 in.	"	"	7.75
"	12 in.	"	"	8.00

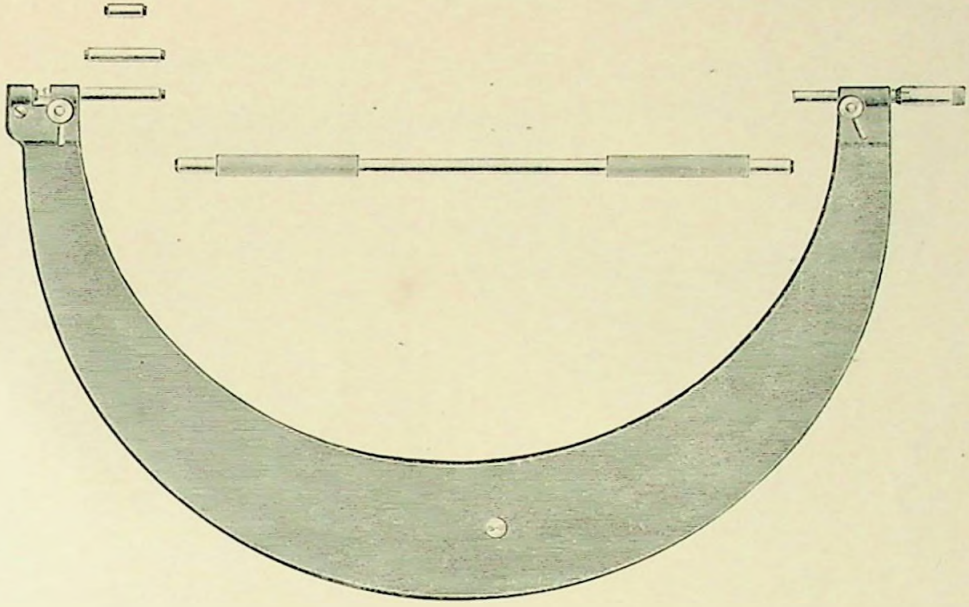
Price of	0 to 25 mm.,	enameled.		$3.50
"	25 to 50 mm.,	"		3.50
"	50 to 75 mm.,	"		5.00
"	75 to 100 mm.,	"		5.50
"	100 to 125 mm.,	"		6.00
"	125 to 150 mm.,	"		6.50
"	150 to 175 mm.,	"		6.75
"	175 to 200 mm.,	"		7.00
"	200 to 225 mm.,	"		7.25
"	225 to 250 mm.,	"		7.50
"	250 to 275 mm.,	"		7.75
"	275 to 300 mm.,	"		8.00



Micrometers from 12 to 18 Inches

We carry in stock Micrometers made as shown in above cut, in sizes from 12 in. to 18 in., running by 1 in. steps. These Calipers are made same as those from 6 in. to 12 in.

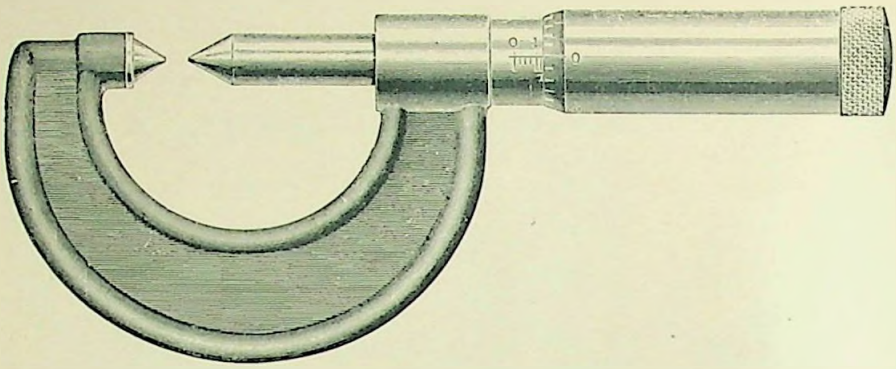
			METRIC MEASURE.	
Price of	13 in.	$8.25	Price of 325 mm.	$8.25
"	14 in.	8.50	" 350 mm.	8.50
"	15 in.	8.75	" 375 mm.	8.75
"	16 in.	9.00	" 400 mm.	9.00
"	17 in.	9.25	" 425 mm.	9.25
"	18 in.	9.50	" 450 mm.	9.50



Large Micrometers with 3 Inch Range

The above cut shows a Caliper we make in sizes above 18 inches. The frame is a steel forging. Each tool is provided with three End Measure Anvils—a 1 in., 2 in. and 3 in.—which are held by split clamp and rest against adjusting screw. Also one Standard End Measure as shown in cut. A feature of this tool is in the gap, allowing face of End Measure and adjusting screw being wiped clean before contact is made and then allowing for inspection by sighting through at any time. This tool is also provided with clamp for locking spindle in any desired position. The frame is finished in black enamel.

Price, 18 to 21	- -	$32.00
" 21 to 24	- -	35.00



Screw Thread Micrometer Caliper No. 29

Although this Caliper will not measure the actual diameter of a V thread screw, still for purposes of comparison it has a wide range of uses.

For making a tap same diameter as some other tap or screw, or a few thousandths larger or smaller.

For cutting screw threads in the lathe to fit nuts, the tap may be measured and then the threads readily cut to same size and to fit nuts, without the common cut and try method, and its consequent loss of time.

The tips are not made to a full point, but instead are flatted to about 1-64 diameter, and the tool is adjusted to 0 when these little flat points are in contact, so it may be used same as any other micrometer, when it is desired to measure at the bottom of a groove or a small recess, the thickness in the centre of twist drills, or similar work.

Frame finished in black enamel only.

Price of One Inch . $4.00

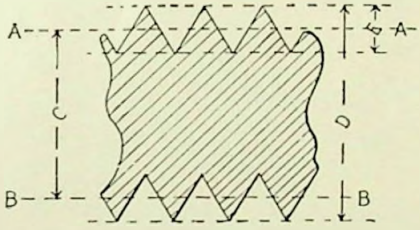
For other sizes, add $1.00 to price of regular.

Standard Screw Thread Micrometer No. 30

These Screw Thread Micrometers provide the best means known of keeping taps, dies, and screw threads generally to standard sizes. Our Micrometer is especially adapted on account of all adjustments being inside the thimble, and we are therefore able to use a solid anvil, which is much more reliable than when this piece is fitted loose. These tools can be made to measure any form of angle-sided threads from the pitch line without the outside diameter being considered at all. Referring to the small sectional cut, A-B are the pitch lines of the thread and C is the measurement which is shown by these calipers. This is one depth of thread less than outside diameter of screw. It will be seen that the only requirement is that the anvil and point of screw shall bear on the angle sides of thread and not on the extreme top or bottom. For "V" threads, sharp top and bottom, it will be seen that a sharp pointed screw and anvil fitted to smallest thread required to be measured would measure correctly all other pitches. In practice this small anvil is hard to handle, and it is found better to use a number of different sizes of anvils. The exact number required is largely a matter of opinion. We should recommend one caliper with anvil fitted to a 32 pitch thread to measure pitches from 20 to 32; one fitted to 20 pitch, one fitted to 16 pitch, and one fitted to 10 pitch, to measure all coarser pitches. This would be for "V" threads; for U. S. Standard threads we would recommend twice the number.

The depth of a "V" thread is found by dividing the constant .866 by the pitch number of threads to inch, and for a U. S. Standard, dividing .6495 by number of threads.

Please state in ordering what pitches you want to measure, and whether "V" or U. S. Standard threads.



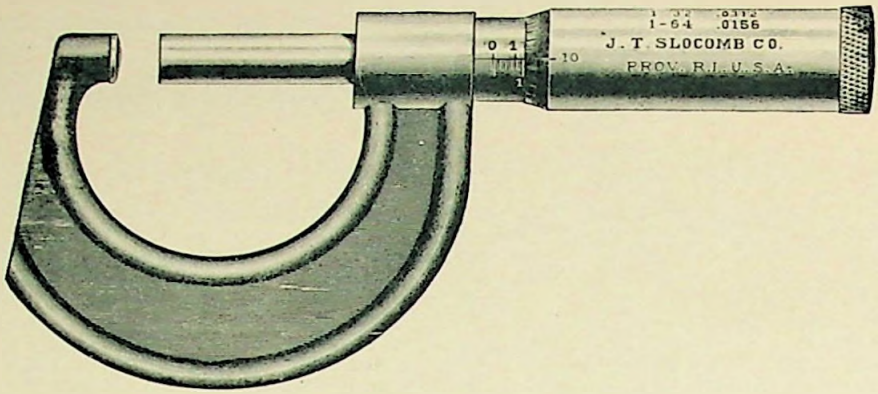
PRICES:

Price of one inch	$6.00
" " two "	7.00
" " three "	7.50

Price of other sizes $2.00 over price of regular Caliper.

This Table may be found useful in connection with Screw Thread Micrometer.

U. S. STANDARD THREADS.				"V" THREADS.			
Pitch	Subtract from Outside Diameter	Pitch	Subtract from Outside Diameter	Pitch	Subtract from Outside Diameter	Pitch	Subtract from Outside Diameter
20	.0324	7	.0928	24	.0361	11	.0787
18	.0360	6	.1082	20	.0433	10	.0866
16	.0406	5 1-2	.1180	18	.0481	9	.0962
14	.0464	5	.1299	16	.0541	8	.1082
13	.0499	4 1-2	.1443	14	.0619	7	.1237
12	.0541	4	.1524	13	.0666	6	.1443
11	.0590	3 1-2	.1855	12	.0722		
10	.0649	3 1-4	.1998				
9	.0721	3	.2165				
8	.0812						



Tube Micrometer Caliper No. 31

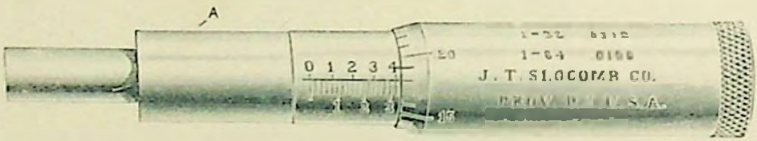
This tool is intended for measuring the walls of tubes.

The anvil will enter a hole 7-16 in. diameter, to a depth of 3-4 in.

It is also useful on jig-work in testing distances of holes from edge and other similar work.

Can furnish them in any of the regular sizes.

Price of Tube Micrometers are same as regular.

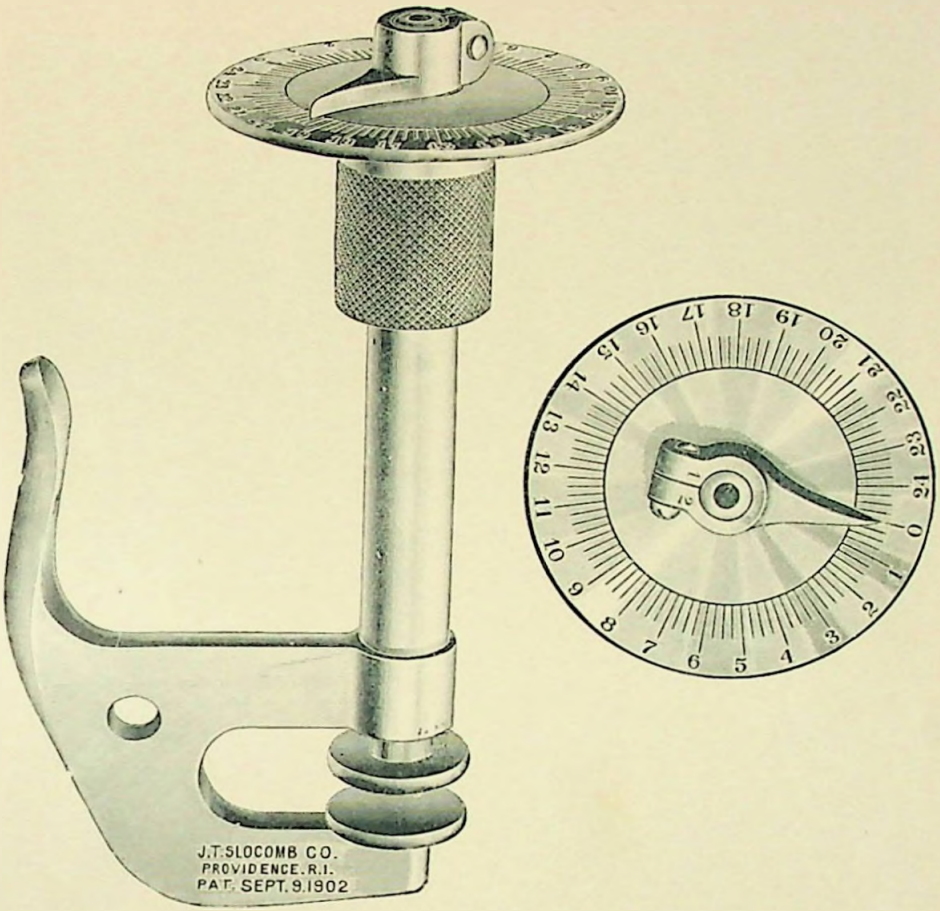


Micrometer Head No. 32

These Micrometer Heads are useful for purposes of fine adjustments in tools or machines. They are intended to be fastened by sweating in with soft solder or split clamp. We carry in stock heads as shown in the illustration. Diameter "A" is 7-16, and the length is 3-4 inch.

As the adjusting screw in our Micrometer, for wear on end of screw and anvil, is inside the thimble, our Micrometer Heads are complete with adjustments, making them specially suited for such a purpose.

Price - $3.00



Quick Acting Micrometer

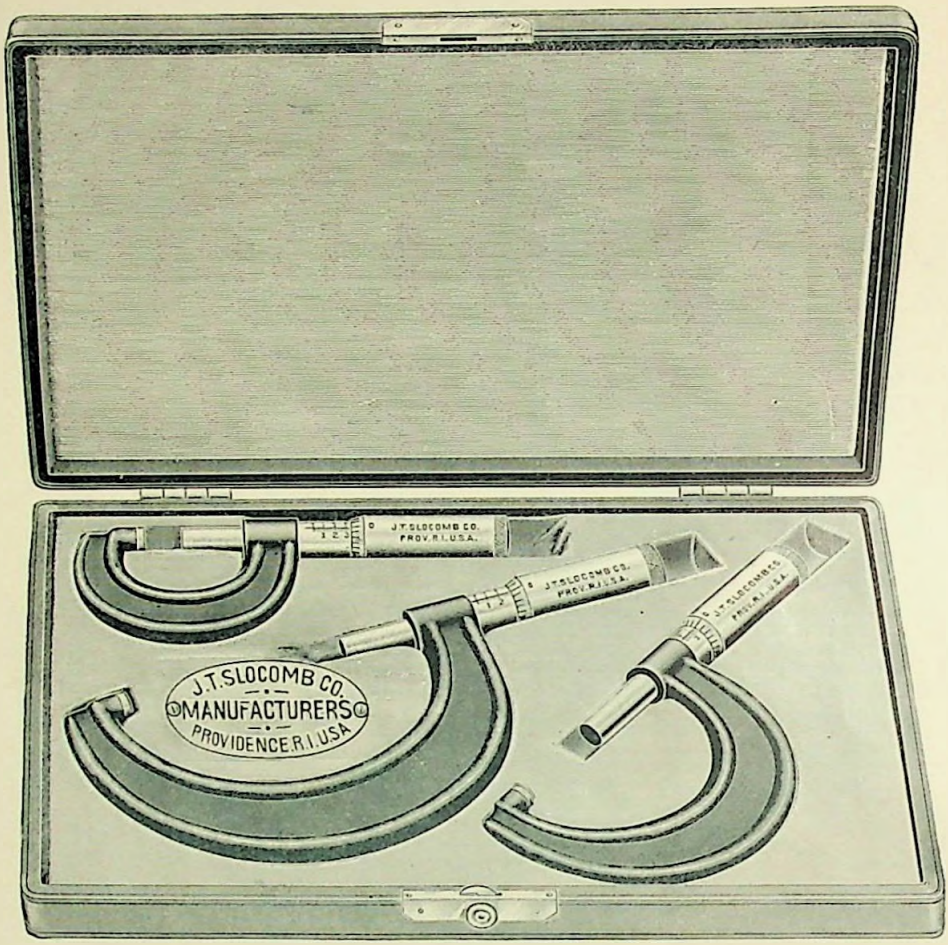
The above cut shows a Micrometer that was made for measuring sheet rubber. This tool has a multiple pitch screw, 1-4 in. lead, and as its range is 1-4 in., all graduations are on dial, making reading very simple. The spindle does not revolve.

The handle, in combination with stem, allows the tool to be held in one hand and operated by the thumb and forefinger, allowing other hand to handle material being measured.

We can graduate these tools to read in thousandths of an inch and can make frame with deep gap allowing measurement far on to the sheet.

We have made these tools for measuring paper, celluloid and sheet steel.

Price quoted on application.



Micrometer Set No. 21

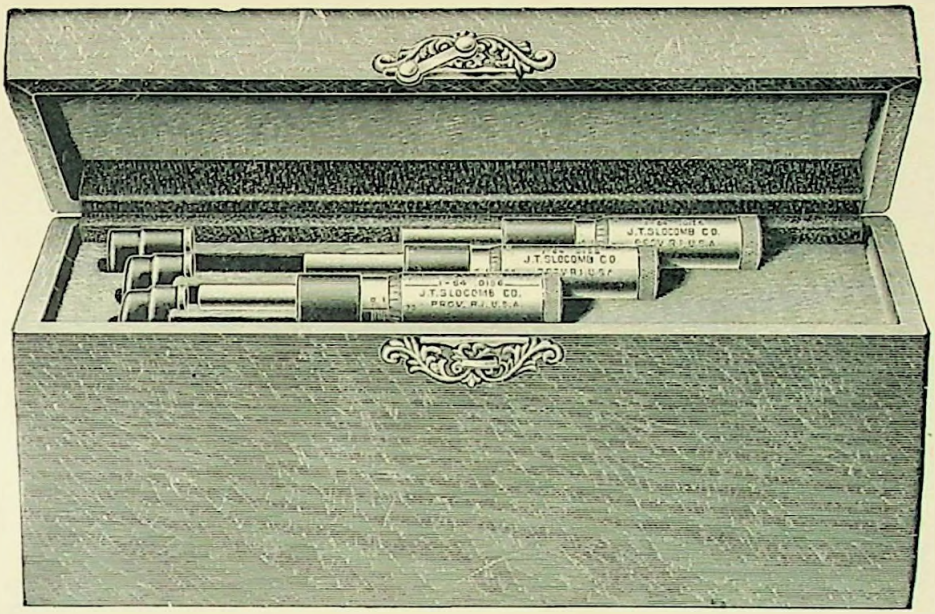
The illustration gives a very good idea.

The three Micrometers, a 1-inch, 2-inch and 3-inch, are so arranged as to economize in space.

The outside dimensions are 9 1-2 in. x 6 3-4 in. x 1 1-2 in.

A good, substantial case, covered with real morocco leather and lined with blue velvet.

Price, complete	- -	$12.00
Price of Case, alone,	-	1.25



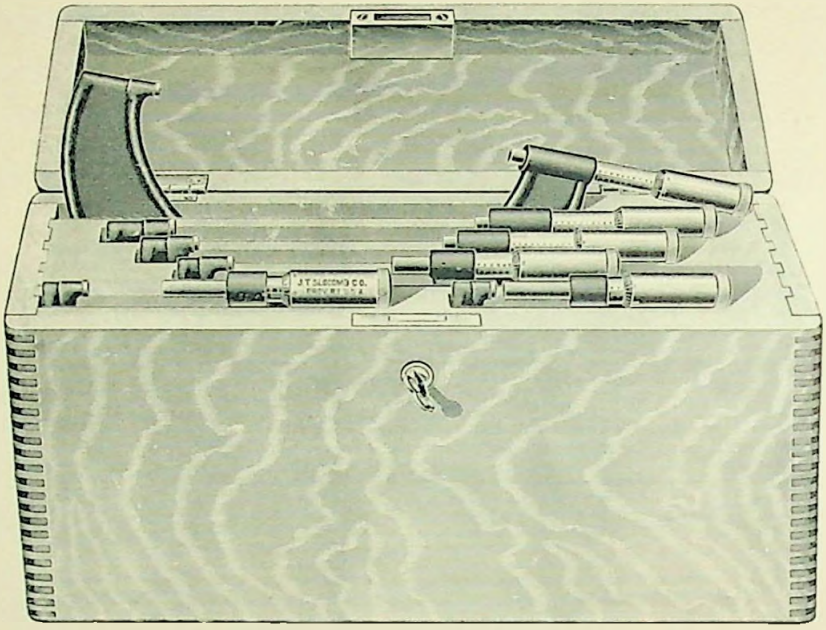
Micrometer Set No. 18

A good, substantial case, covered with real morocco leather and velvet lined. Dimensions, 8 3-4 in. x 3 in. x 1 1-2 in.

An inducement offer.

Three Micrometer Calipers, 1-inch, 2-inch and 3-inch, and this fine case.

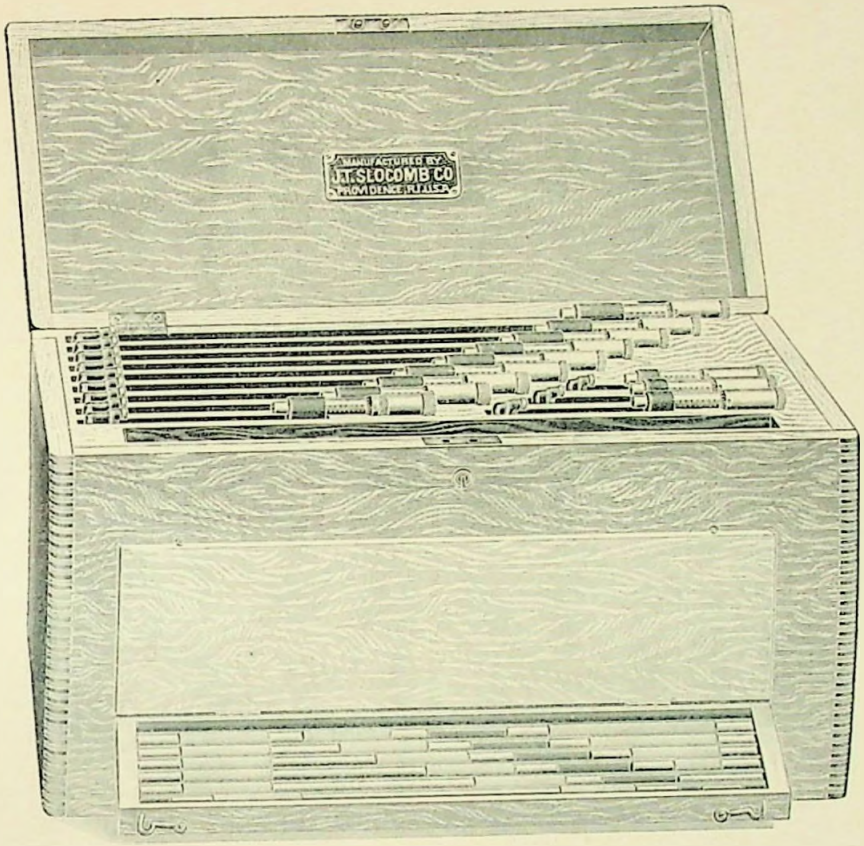
Price, complete - -	$12.00
Price of Case, alone -	1.25



Micrometer Set No. 19

A fine quartered oak case, with lock and key, containing Micrometer Calipers from 1 in. to 6 in., inclusive.

Price, complete - -	$33.25
Price of Case, alone -	3.25



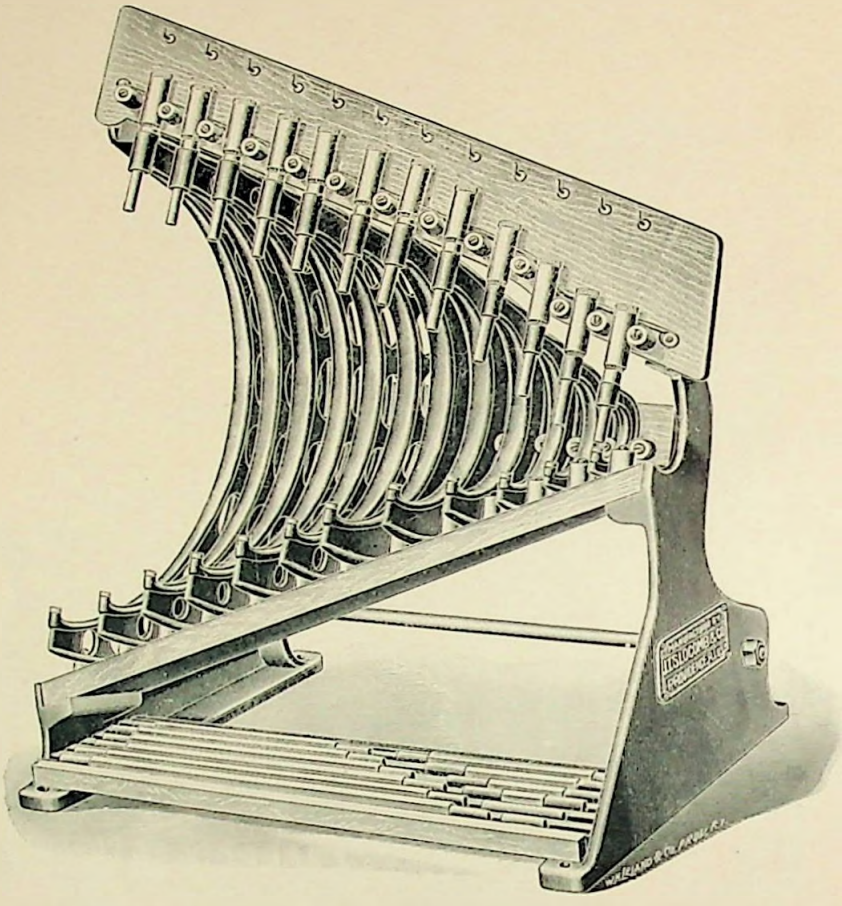
Micrometer Set No. 22

The above illustration represents a set of Micrometer Calipers ranging from 1 in. to 12 in., with End Measures, in an oak case, with lock and key.

The small case shown at the front fits the extra pocket shown in case.

These cases are substantially made and are an advantage over a rack in keeping the tools free from dust.

Price, complete - -	$100.00
Price of Case only - -	8.50



Micrometer Set No. 20

Rack is intended for tool-room use.

Ends are cast-iron, black enamel finish.

Slats are oak, with rubber button partings.

Set of Micrometer Calipers range from 1 in. to 12 in., inclusive.

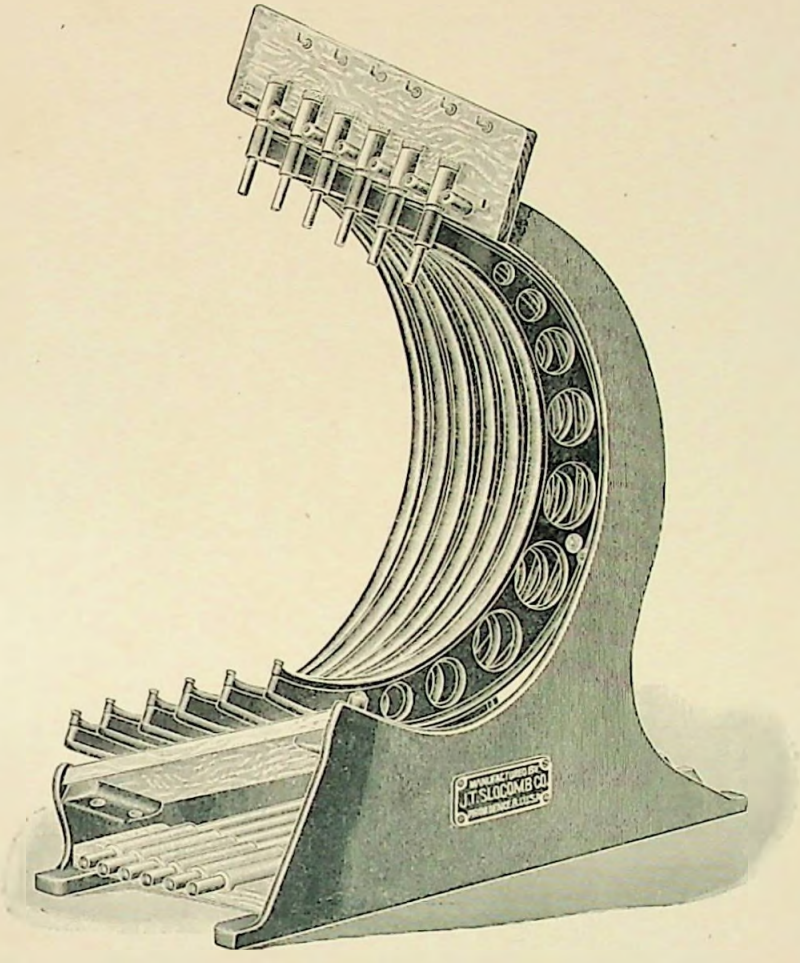
Hooks are provided over each tool for workman's check.

Lower slat is grooved and contains set of end measures from 1 in. to 12 in., inclusive.

Furnished complete or with any number of tools required.

Your tool-room is not complete without it.

Price, complete - -	$96.50
Price of Rack, only -	5.00



Micrometer Set No. 24

This set consists of six Micrometers and six End Measures, measuring from 12 in. to 18 in., by thousandths.

The Rack is made same as No. 20, with the exception that the End Measures lie in a different direction.

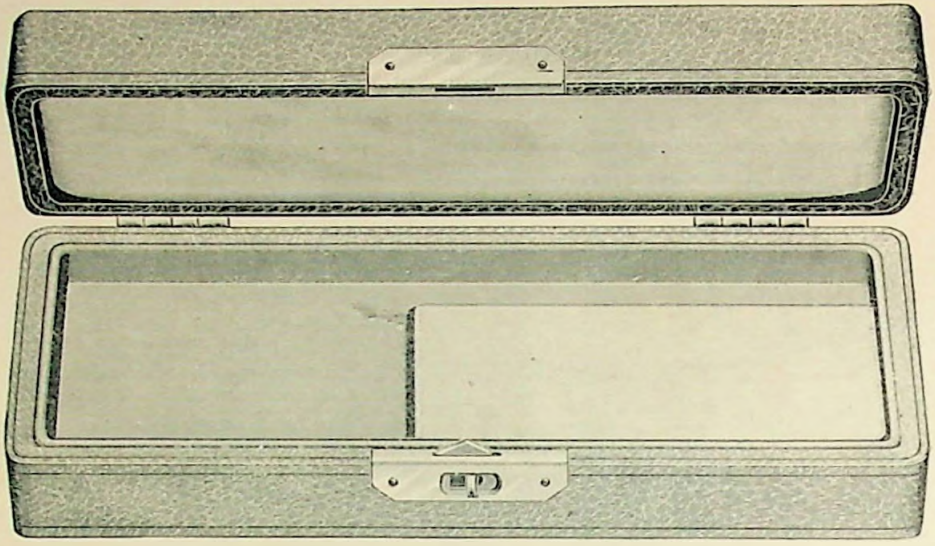
Hooks are provided over each tool for workman's check.

End Measures are 7-16 in. in diameter.

Furnished complete or with any number of tools required.

Price, complete - -	$75.00
Price of Rack, alone -	6.75

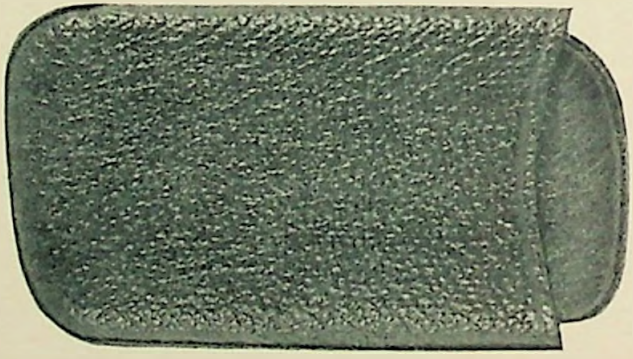
For price on separate Micrometers, see page 12. For price on separate End Measures, see page 26.



MOROCCO CASES

Genuine Morocco Leather and velvet-lined cases for either 1-inch, 2-inch or 3-inch Micrometer Calipers.

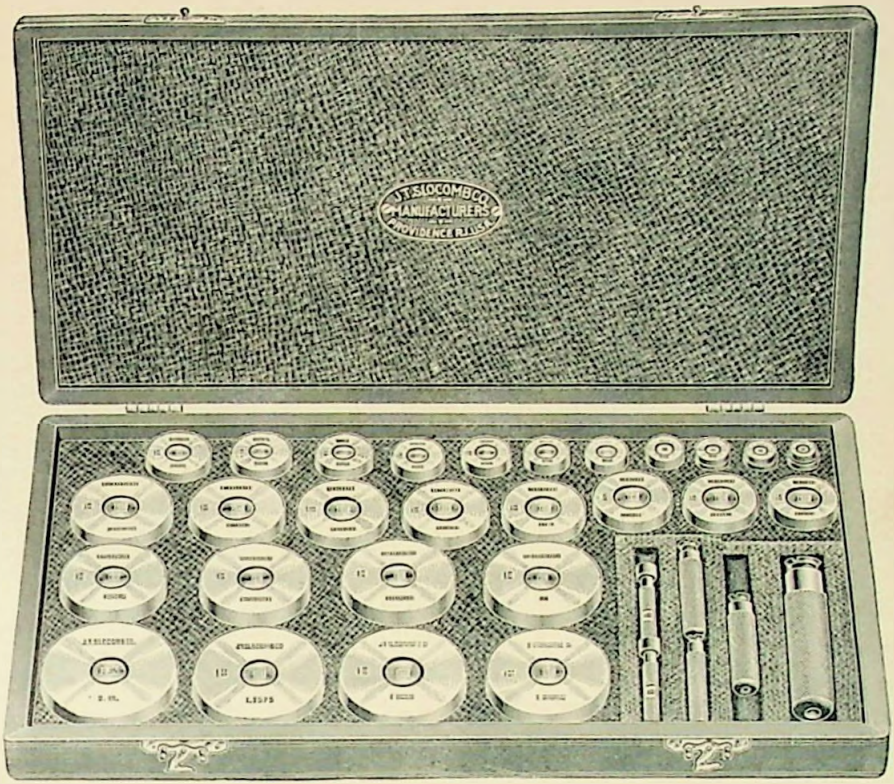
Price,	1-inch	-	$ .75
"	2 "	-	1.00
"	3 "	-	1.00



ONE-HALF INCH CALIPER CASE

A telescopic, all-leather case. Very neat and convenient for carrying in the pocket.

Price, - 25 cents



Standard Reference Discs

This Set contains Discs from 1-4 in. to 2 in., inclusive, running by 1-16 in. steps.

There are twenty-nine (29) Discs and four (4) Detachable Handles.

The Morocco Case is substantially made.

Brass Plugs screwed to bottom of Case support each Disc. A number is stamped on top of each plug to correspond with number on Disc.

With this Case the marking on each Disc is plainly in view.

These Discs are intended for reference. Discs from 9-16 in. to 1-12 in. are 1-4 in. thick. From 1 9-16 in. to 2 in. are 5-16 in. thick. The 1-4 in and 5-16 in. are made in one piece with handle.

They are made of Tool Steel, hardened, very hard, and finished to the highest accuracy.

Price of Set, complete - $32.00

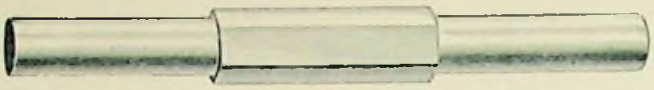
PRICES OF SINGLE DISCS

*1- 4 in.	$1.50	3-4 in.	$1.05	1 3-16 in.	$1.10	1 5-8 in.	$1.40
*5-16 "	1.50	13-16 "	1.05	1 1-4 "	1.10	1 11-16 "	1.40
3-8 "	.90	7-8 "	1.05	1 5-16 "	1.25	1 3-4 "	1.40
7-16 "	.90	15-16 "	1.05	1 3-8 "	1.25	1 13-16 "	1.55
1- 2 "	1.00	1 "	1.10	1 7-16 "	1.25	1 7-8 "	1.55
9-16 "	1.00	1 1-16 "	1.10	1 1-2 "	1.25	1 15-16 "	1.55
5-8 "	1.00	1 1-8 "	1.10	1 9-16 "	1.40	2 "	1.55
11-16 "	1.00						

Sizes marked * are furnished with handles.

PRICES OF HANDLES

3-8 to 1-2 in., $0.65 9-16 to 5-8 in., $0.65 11-16 to 1 in., $0.75 1 1-16 to 2 in., $0.75



Standard End Measures

They are made of tool steel, 3-10 inch diameter, with ends carefully hardened, ground, and lapped accurately.

Rubber tubing is used over these rods to prevent changes by temperature due to handling.

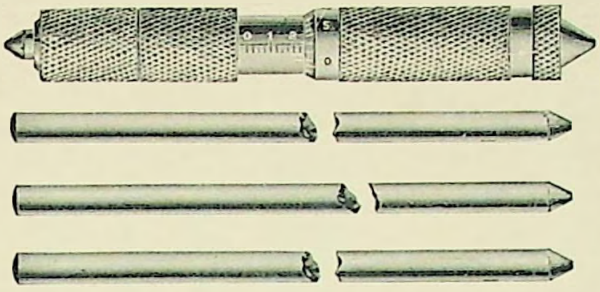
They are intended for use in keeping Micrometer Calipers properly adjusted.

Price of 1 in.	$0.75	Price of 25 mm.	$0.75
" 2 in.	1.00	" 50 mm.	1.00
" 3 in.	1.10	" 75 mm.	1.10
" 4 in.	1.20	" 100 mm.	1.20
" 5 in.	1.30	" 125 mm.	1.30
" 6 in.	1.40	" 150 mm.	1.40
" 7 in.	1.50	" 175 mm.	1.50
" 8 in.	1.60	" 200 mm.	1.60
" 9 in.	1.70	" 225 mm.	1.70
" 10 in.	1.80	" 250 mm.	1.80
" 11 in.	1.90	" 275 mm.	1.90
" 12 in.	2.00	" 300 mm.	2.00

Large End Measures

7-16 DIAMETER

Price of 13 in.	$2.25	Price of 325 mm.	$2.25
" 14 in.	2.35	" 350 mm.	2.35
" 15 in.	2.45	" 375 mm.	2.45
" 16 in.	2.55	" 400 mm.	2.55
" 17 in.	2.65	" 425 mm.	2.65
" 18 in.	2.75	" 450 mm.	2.75



Inside Micrometer Gauge No. 11

This tool is intended to measure inside diameters above 2 1-2 inches. It does not measure a definite distance in inches. The micrometer screw has a range of 1-4 inch which enables allowances or differences of this amount, or less, to be accurately measured in thousandths; the diameter or length only being limited by the length of rod, which for long lengths can be readily cut from standard 5-32 in. steel rod, rods to measure diameters to 9 inches being furnished with the tool.

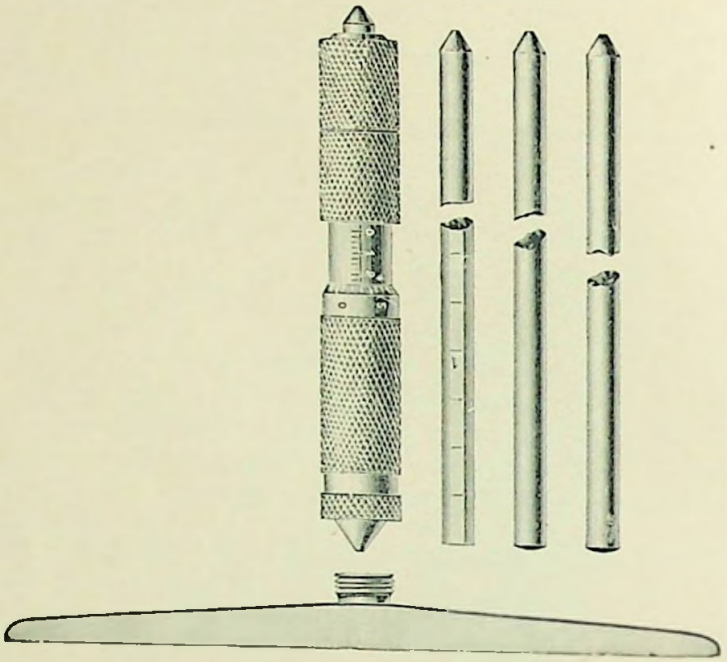
Price of Complete Tool - $1.75
Extra Wires - - 2c. per inch

Micrometer Gauge Extension Nos. 1 & 2

These extensions can be made of most any length, and for diameters or lengths greater than 9 inches are much better than extra long rods. A long rod is furnished with each extension which will run through the micrometer and through the extension tube as far as the pointed tip, so (with the extension), one rod covers a great range of sizes. They are nickel plated all over, to give the brass tube the same color as the steel tips.

The No. 1 extension, with Micrometer, measures from 9 inches to 16 1-2 inches, and a No. 2 with Micrometer from 16 1-2 to 32 inches.

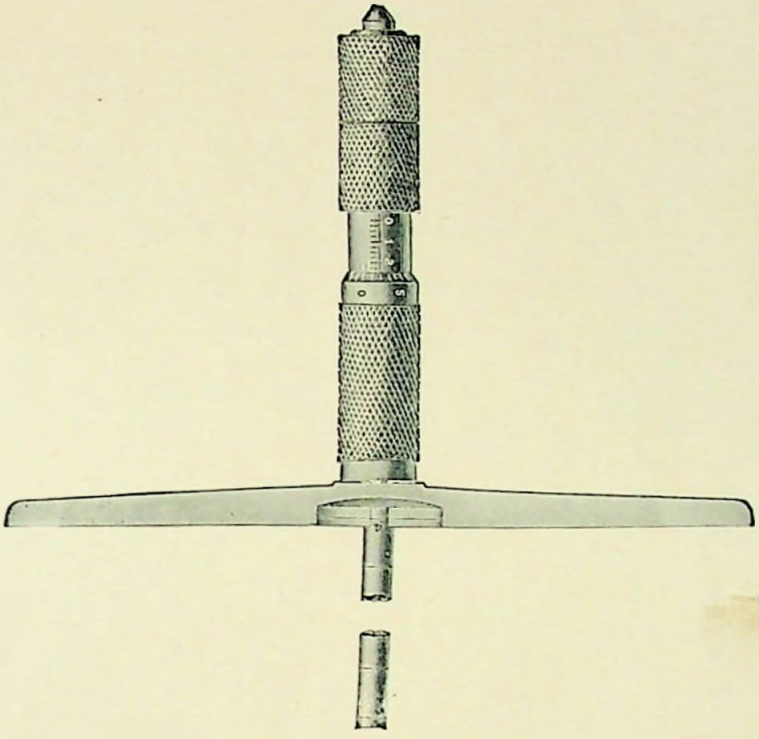
No. 1. Price - - - $1.00
No. 2. " - - - 1.25



Combination Micrometer Gauge No. 12

The Micrometer body and three plain rods are the same as in our Inside Micrometer Gauge, but the fourth rod is graduated as shown, in 1-4 inch divisions for use with the depth gauge attachment. It measures standard as a depth gauge, but only allowances or differences as an inside Caliper.

Price of Combination Tool with Wire Graduated to 4 inches, for depth gauge	$2.50
Price in Morocco Case	3.25
" of Wire graduated to 6 inches, for depth gauge	.40
" " " " 12 " " " "	.80

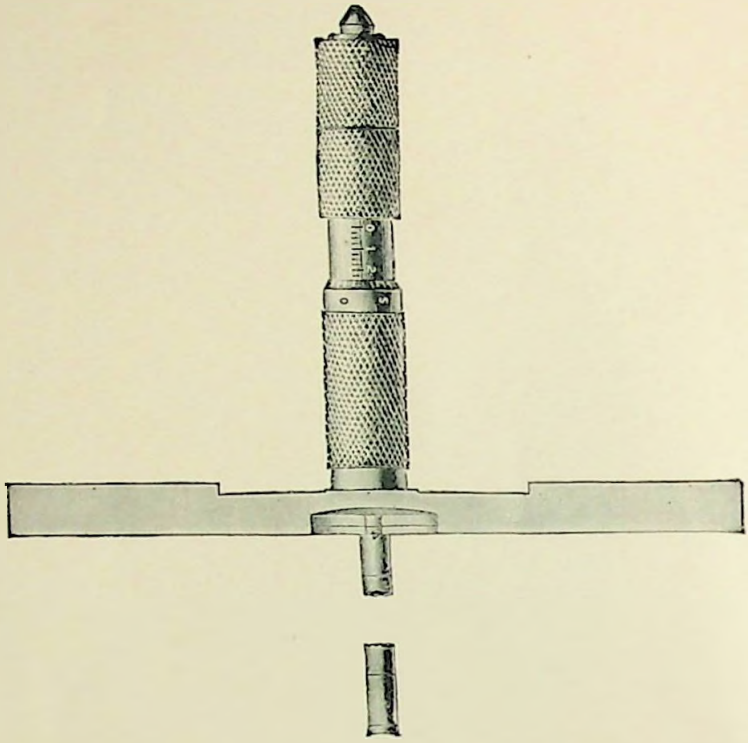


Com. Micrometer Gauge No. 13

This tool differs from Com. Micrometer Gauge No. 12 only in the graduated rod and the line in base to match. The object being to produce most particularly an accurate and convenient depth gauge.

The graduated rod has lines running completely around. It must be fitted to the base in which it is used.

Price of complete Com. Tool, No. 13, with 4-inch graduated rod, $3.50
" " 6-inch graduated rod, including fitting to base . . 1.00
" " 12-inch " " " " " . . 1.50
" " Morocco Case, if desired, ...75



Com. Micrometer Gauge No. 14

This tool differs from Com. Micrometer Gauge No. 13 only in its parallel base, which allows of its being used inverted, so as to measure standard heights (as well as depths) above 1-4 inch, which is the thickness of the base. The base is hardened and accurately ground on both top and bottom.

This tool will be found of value in adjusting planer tools, as it covers about all the ground of a step-height gauge, also measuring all intermediate sizes by thousandths, and to the length of graduated rod. For use as a height-gauge on planer work, the body of micrometer can be dropped through a hole in planer platen, or be allowed to overhang the edge of platen or work.

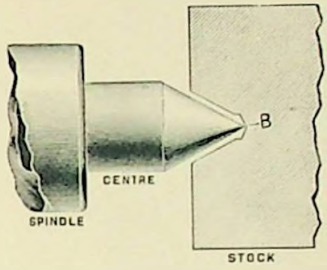
No. 13 and 14 tools include screw tip and three plain rods for the inside Caliper, the same as furnished with No. 12 tool.

Price of No. 14, complete - - - - -	$4.50
" " 6-inch Rod, including fitting - -	1.00
" " 12-inch " " " - -	1.50

Combination Center Drills

Combination Drills and Countersinks save time in centering lathe work.
The first cost is less than other tools for the purpose.
They do better work than other tools.
Slocomb Center Drills were the pioneers.
They are still the **best in quality,** and the price is as low as any.

A center bearing on point, as shown here at B, has caused much loss. Loss in bad work, aggravation and delay, and all for the want of a little care in drilling the centers, or, what is better, Combination Center Drills, which do the work without close attention. As long as there is some drill remaining not all ground away, there is a guarantee of proper clearance for point of lathe center.



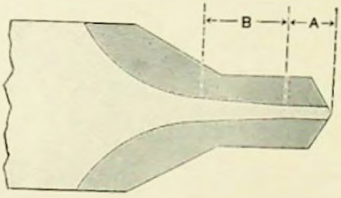
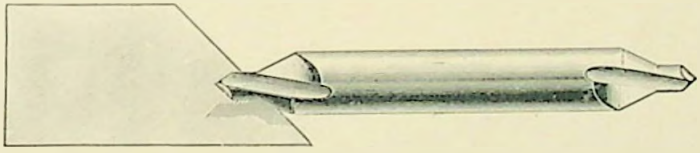


Fig. 2 represents a section much enlarged through point of our center drill.

Thickness A in center of drill remains same as far as grinding is supposed to go, then thickness at B for strength in throat.

Some who have used these drills, did not get the best results on account of the way they were handled. There is some knack in handling.

Speed and feed should suit the drill regardless of countersink.



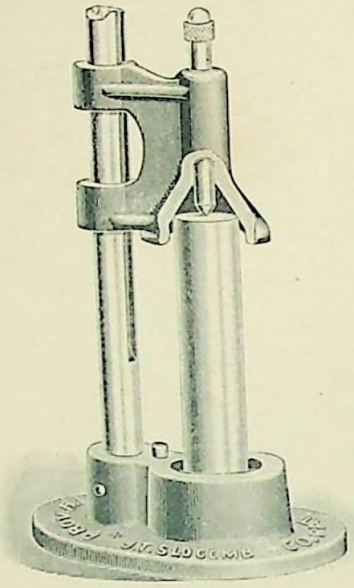
The above illustration represents a Combination Center Drill starting a hole at quite a sharp angle to the surface.

In an experience of several years in light tool making, we have found these drills of much value for such work.

When the small drill gets fairly started, it acts the same as the teat on a counterbore and prevents the countersink running off, so when the hole is countersunk sufficiently to allow the large drill to enter, that drill will start properly.

A	Size of Body 3-16 in., of Drills 1-8 in., and 3-32 in.	**$1.50 per Dozen.**
B	" " " 3-16 " " " 1-8 "	
C	" " " 3-16 " " " 3-32 "	
D	" " " 15-64 " " " 5-64 "	
E	" " " 13-64 " " " 1-16 "	
H	" " " 5-32 " " " 3-64 "	
F	Size of Body 7-16 in. Drills 5-32 in.	**$3.00 per Dozen**
G	" " " 7-16 in. " 3-16 in.	

☞ **Please use Letters only, in Ordering.**



PATENTED JAN. 25, 1898.

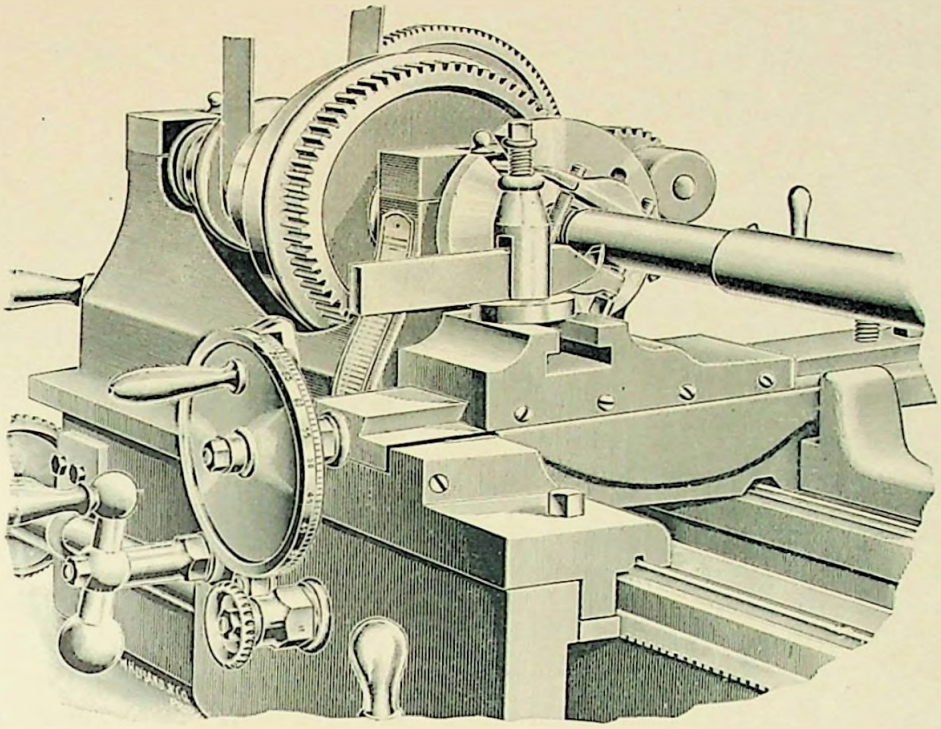
Severance Centering Tool

The Severance Centering Tool in connection with our Combination Center Drills, make a very good means of centering small lathe work. When stock is cut off in the lathe, or similar way, and the ends are fairly true, this Centering Tool will do accurate and rapid work.

They are made in one size covering diameters from 5-16 inches to 1 1-2 inches, and lengths to 12 inches.

The bell center punch is arranged to slide on the splined upright, and is prevented from turning by a key, set in its bore, which fits the spline in the upright. A small rubber plug is inserted in a hole in the base-plate for the sliding head to drop on.

Price - - - $2.00



Graduated Dial on Lathe Cross Screw

Save money by a liberal use of Micrometer Calipers, together with graduated dials on all cut adjusting screws.

In these days of high speed steel and high speed ways generally, don't overlook high speed measuring.

The above illustration shows a dial we use on small lathes. The idea is to have it large enough to allow of coarse graduations.

To turn a size, simply round up the work and measure with the Micrometer, then make the necessary adjustments by the dial.

Our Micrometer Calipers are designed especially for all-round machine shop work. We recommend them in the place of all other outside gauges where the work is anyway close. Micrometer Calipers and these Micrometer Dials, fill two real "long-felt wants" in machine shops. First, an accurate way of measuring work, and then an accurate way of adjusting cutting tools in accordance with these measurements.

The above is offered as a suggestion.
We do not furnish these dials.

... Special Features ...

of the

Slocomb Micrometer

The construction of these Calipers differs considerably from all others.

One of the most important improvements embodied, is in the adjustment between the measuring screw and its nut. This is done by drawing the spindle back in line with its axis, which keeps all threads in contact and **does not shorten** the length of wearing surface, as when the adjustment is made by pinching together one end of nut as is usual. A long bearing on screw insures uniform wear. Large wearing surface, together with hard stock that the screws are made of, give the **Slocomb Micrometer** a **long life** even under severe work.

The area of surface in contact between one side of threads of screw and its nut, figure out about 3-8 of a square inch, or about six times the area of face of anvil. It should be understood, in a tool where accuracy is so very essential, that its life and value depend upon the extent and nature of its wearing surface. A short bearing of the nut on measuring screw will wear the screw out of pitch. The **Slocomb Micrometer** will remain accurate after long use.

Another valuable feature not found in other micrometers lies in the **spring.** This spring causes a slight uniform friction on the spindle, so it is **never loose at any point** and **will not move around of its own accord.** Incidentally, this spring keeps the spindle back in its seat, and does not call for a rigid fit between spindle and nut with its consequent danger of roughing up and sticking.

The anvil is practically solid with the frame. The bearing supporting the plain part of spindle is a bushing and is easily renewable when worn.

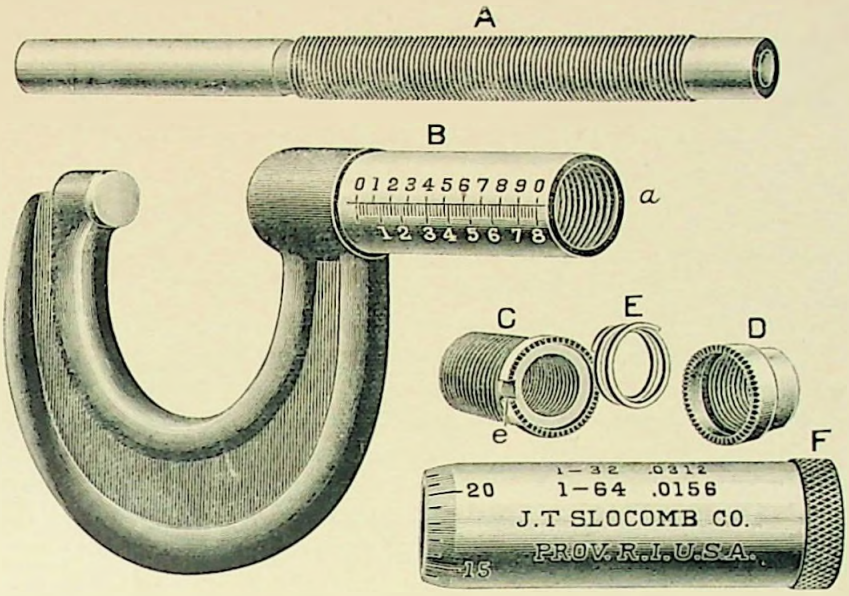
The spindle is adjusted down to compensate for wear on anvil by turning the main nut. This is a differential screw adjustment and is very fine.

All frames up to and including the 6 in. are drop-forged from bar steel; the larger sizes are steel castings.

These Tools are not an experiment.

They have been in use since 1894 in many of the best shops in America and in Europe and have been thoroughly tested. We can furnish the best references.

For Details of Construction see following page.



MICROMETER PARTS

A is the Screw or Spindle, *B* the Frame, *C* and *D* Nuts, *E* Spring, and *F* Thimble. Main nut *C* is threaded externally and screws a tight fit into the internally threaded sleeve of frame *B* at *a*. A small spanner-wrench is provided that fits notch at small *e* in main nut *C*. This is where the adjustment is made to compensate for wear at anvil usually made with an adjustable anvil.

When tools are sent out, nut *C* is screwed home, except one turn which is left for adjustment. As the internal thread in nut *C* is 40 P and the external 32, then, when the parts are in place, turning down nut *C* advances spindle *A* the difference in their pitches, or 64-4 thousandths per revolution. This makes the best means of adjustment ever applied to a micrometer. Small nut *D* and Spring *E* compensate for wear in threads of spindle *A*. Main nut *C* and small nut *D* have each 56 teeth milled on their faces, as shown. When all together, the clutch faces of these two nuts are in mesh, and their position is plainly marked. To take up wear, the spindle is withdrawn sufficiently to allow these two nuts to be separated, and the teeth are advanced, one or more, and held in mesh while the spindle is advanced into nut *C*, when nuts cannot be separated.

Spring *E* inserted in counterbore between nuts makes a spring friction on spindle *A*, regardless of wear. Spindle always has sufficient friction to prevent its turning of its own accord, a very valuable feature and found in the **Slocomb Caliper, only.** Thimble *F* is attached in the usual way and covers the exposed part of screw and adjusting nuts.

CAUTION.

If the spindle is removed from nuts, see when re-entering that the clutch teeth on nuts *C* and *D* are properly in mesh, according to line cut on outside, and hold in place till screw enters main nut *C*; otherwise small nut is liable to be lost up inside thimble.

To Read a Micrometer

A Micrometer is very easily read, but of course, like many other things, rapid work is obtained only after some practice.

Many machinists read the Micrometer almost at a glance.

Our Caliper is made with a 40 pitch screw which, of course, will advance .025 in. per revolution, or require 5 revolutions to advance .125 in., which is equal to 1-8 inch. There is a revolution line cut upon the sleeve which forms the support of screw. This revolution line runs parallel with axis of screw and, in combination with the zero line on end of thimble, is used to indicate whole turns of screw.

The end of thimble is graduated into 25 divisions, and as a whole revolution advances the screw .025 in., then turning the thimble one division advances the screw .001 in. The end of thimble is further divided by long lines into 5 equal parts, which are numbered for convenience in reading.

The cross graduating, adjoining the revolution line, is simply for convenience in counting the revolutions of screw, thus: if there are three of these divisions exposed, and the zero line on thimble corresponds with the revolution line, the screw has made exactly three revolutions, or if there are three divisions exposed and the thimble does not stand at zero, then there is an additional fractional part of a revolution, and the exact fractional part is read from the graduated end of thimble. If the screw has gone three turns and the line on thimble numbered 5 matches the revolution line, then three revolutions at .025 in. per revolution equals .075 in. and adding the .005 in. read from the thimble, we have .080 in. the amount the Caliper stands open.

For convenience in reading, and in reckoning the number of turns of screw, every fourth line of the cross graduating is extended at the upper side of the revolution line and numbered to denote the amounts of opening at these complete revolutions, thus: at the cross line numbered 5, the 5 indicates an opening of 5-10 or .500 in., which equals 1-2 in., then if the thimble does not stand at zero its reading must be added to this.

In our Caliper, in addition to what is common, we extend every fifth line of the cross line graduating on the lower side of revolution line, and number them from 1 to 8. These fifth lines indicate every fifth revolution of screw and equal eighths of an inch, so if a person chooses he need not use decimals except for measurements within eighths.

TABLE OF

DECIMAL EQUIVALENTS

OF

8ths, 16ths, 32ds, and 64ths of an Inch

8ths.

$\frac{1}{8}$ = .125
$\frac{2}{8}$ = .250
$\frac{3}{8}$ = .375
$\frac{4}{8}$ = .500
$\frac{5}{8}$ = .625
$\frac{6}{8}$ = .750
$\frac{7}{8}$ = .875

16ths.

$\frac{1}{16}$ = .0625
$\frac{3}{16}$ = .1875
$\frac{5}{16}$ = .3125
$\frac{7}{16}$ = .4375
$\frac{9}{16}$ = .5625
$\frac{11}{16}$ = .6875
$\frac{13}{16}$ = .8125
$\frac{15}{16}$ = .9375

32nds.

$\frac{1}{32}$ = .03125
$\frac{3}{32}$ = .09375
$\frac{5}{32}$ = .15625
$\frac{7}{32}$ = .21875
$\frac{9}{32}$ = .28125
$\frac{11}{32}$ = .34375
$\frac{13}{32}$ = .40625
$\frac{15}{32}$ = .46875
$\frac{17}{32}$ = .53125
$\frac{19}{32}$ = .59375
$\frac{21}{32}$ = .65625
$\frac{23}{32}$ = .71875
$\frac{25}{32}$ = .78125
$\frac{27}{32}$ = .84375
$\frac{29}{32}$ = .90625
$\frac{31}{32}$ = .96875

64ths.

$\frac{1}{64}$ = .015625
$\frac{3}{64}$ = .046875
$\frac{5}{64}$ = .078125
$\frac{7}{64}$ = .109375
$\frac{9}{64}$ = .140625
$\frac{11}{64}$ = .171875
$\frac{13}{64}$ = .203125
$\frac{15}{64}$ = .234375
$\frac{17}{64}$ = .265625
$\frac{19}{64}$ = .296875
$\frac{21}{64}$ = .328125
$\frac{23}{64}$ = .359375
$\frac{25}{64}$ = .390625
$\frac{27}{64}$ = .421875
$\frac{29}{64}$ = .453125
$\frac{31}{64}$ = .484375
$\frac{33}{64}$ = .515625
$\frac{35}{64}$ = .546875
$\frac{37}{64}$ = .578125
$\frac{39}{64}$ = .609375
$\frac{41}{64}$ = .640625
$\frac{43}{64}$ = .671875
$\frac{45}{64}$ = .703125
$\frac{47}{64}$ = .734375
$\frac{49}{64}$ = .765625
$\frac{51}{64}$ = .796875
$\frac{53}{64}$ = .828125
$\frac{55}{64}$ = .859375
$\frac{57}{64}$ = .890625
$\frac{59}{64}$ = .921875
$\frac{61}{64}$ = .953125
$\frac{63}{64}$ = .984375

DECIMAL EQUIVALENT

OF THE

Numbers of Twist Drill and Steel Wire Gauge

No	Size of No in Decimals	No	Size of No in Decimals.	No	Size of No in Decimals.	No.	Size of No in Decimals.	No.	Size of No in Decimals.
1	.2280	17	.1730	33	.1130	49	.0730	65	.0350
2	.2210	18	.1695	34	.1110	50	.0700	66	.0330
3	.2130	19	.1660	35	.1100	51	.0670	67	.0320
4	.2090	20	.1610	36	.1065	52	.0635	68	.0310
5	.2055	21	.1590	37	.1040	53	.0595	69	.02925
6	.2040	22	.1570	38	.1015	54	.0550	70	.0280
7	.2010	23	.1540	39	.0995	55	.0520	71	.0260
8	.1990	24	.1520	40	.0980	56	.0465	72	.0250
9	.1960	25	.1495	41	.0960	57	.0430	73	.0240
10	.1935	26	.1470	42	.0935	58	.0420	74	.0225
11	.1910	27	.1440	43	.0890	59	.0410	75	.0210
12	.1890	28	.1405	44	.0860	60	.0400	76	.0200
13	.1850	29	.1360	45	.0820	61	.0390	77	.0180
14	.1820	30	.1285	46	.0810	62	.0380	78	.0160
15	.1800	31	.1200	47	.0785	63	.0370	79	.0145
16	.1770	32	.1160	48	.0760	64	.0360	80	.0135

TAP DRILL LIST

From 1-4 to 3 inches, inclusive.

These sizes will not give a full thread, except on U. S. Standard, but is sharp enough for "V" threads in most cases.

Diameter of Screw	Threads per Inch.	Size of Tap Drill.	Diameter of Screw.	Threads per Inch.	Size of Drill.
1-4	20	.185	1 1-4	7	1.065
5-16	18	.240	1 3-8	6	1.160
3-8	16	.294	1 1-2	6	1.284
7-16	14	.344	1 5-8	5 1-2	1.389
1-2	13	.400	1 3-4	5	1.491
9-16	12	.454	1 7 8	5	1.616
5-8	11	.507	2	4 1-2	1.712
3-4	10	.620	2 1-4	4 1-2	1.962
7-8	9	.731	2 1-2	4	2.176
1	8	.837	2 3-4	4	2.426
1 1-8	7	.940	3	3 1-2	2.629

J. T. SLOCOMB CO., PROVIDENCE, R. I., U. S. A.

THE MICROMETER CALIPER AS A LIMIT GAUGE

The Micrometer is an ideal limit gauge, for it has a great range, is accurate and durable, readily used and is not expensive. The following tables, taken from a catalog issued by Newell Engineering Co., London, England, we believe to be valuable in connection with the use of Micrometer Calipers.

LIMITS OF ERRORS IN STANDARD HOLES

	Nominal Diameters	1-2 in	1 in.	2 in	3 in.	4 in.	5 in	6 in.
Class A	Over standard	.00025	.00050	.00075	.00100	.00100	.00100	.00150
	Under "	.00025	.00025	.00025	.00050	.00050	.00050	.00050
	Margin	.00050	.00075	.00100	.00150	.00150	.00150	.00200
Class B	Over standard	.00050	.00075	.00100	.00125	.00150	.00175	.00200
	Under "	.00050	.00050	.00050	.00075	.00075	.00075	.00100
	Margin	.00100	.00125	.00150	.00200	.00225	.00250	.00300

ALLOWANCES (Over Standard) FOR FORCE FITS

Nominal Diameters	1-2 in	1 in.	2 in	3 in.	4 in	5 in.	6 in
Mean	.00075	.00175	.00350	.00525	.00700	.00900	.01100
High	.00100	.00200	.00400	.00600	.00800	.01000	.01200
Low	.00050	.00150	.00300	.00450	.00600	.00800	.01000
Margin	.00050	.00050	.00100	.00150	.00200	.00200	.00200

ALLOWANCES (Over Standard) FOR DRIVING FITS

Nominal Diameters.	1-2 in.	1 in.	2 in.	3 in.	4 in.	5 in.	6 in.
Mean	.000375	.000875	.00125	.00200	.00250	.00300	.00350
High	.00050	.00100	.00150	.00250	.00300	.00350	.00400
Low	.00025	.00075	.00100	.00150	.00200	.00250	.00300
Margin	.00025	.00025	.00050	.00100	.00100	.00100	.00100

ALLOWANCES (Below Standard) FOR PUSH FITS

Nominal Diameters.	1-2 in	1 in.	2 in.	3 in.	4 in.	5 in.	6 in.
High	.00025	.00050	.00100	.00150	.00150	.00200	.00200
Low	.00075	.00100	.00150	.00200	.00200	.00250	.00250
Margin	.00050	.00050	.00050	.00050	.00050	.00050	.00050

ALLOWANCES (Below Standard) FOR RUNNING FITS

	Nominal Diameters	1-2 in.	1 in	2 in.	3 in	4 in.	5 in.	6 in.
Class X	Mean	.00150	.00200	.00260	.00320	.00380	.00440	.00500
	High	.00100	.00125	.00175	.00200	.00250	.00300	.00350
	Low	.00200	.00275	.00350	.00425	.00500	.00575	.00650
	Margin	.00100	.00150	.00175	.00225	.00250	.00275	.00300
Class Y	Mean	.00100	.00150	.00190	.00230	.00270	.00310	.00350
	High	.00075	.00100	.00125	.00150	.00200	.00225	.00250
	Low	.00125	.00200	.00250	.00300	.00350	.00400	.00450
	Margin	.00050	.00100	.00125	.00150	.00150	.00175	.00200
Class Z	Mean	.000625	.00100	.00120	.00140	.00160	.00180	.00200
	High	.00050	.00075	.00075	.00100	.00100	.00125	.00125
	Low	.00075	.00125	.00150	.00200	.00225	.00250	.00275
	Margin	.00025	.00050	.00075	.00100	.00125	.00125	.00150

Class X is suitable for engine and other work where easy fits are wanted.
Class Y is suitable for high speeds and good average machine work.
Class Z is suitable for fine tool work.

Drill List

For Machine Screw Taps

Size of Tap	Size of Drill No.
2 x 48	50
2 x 56	49
2 x 64	48
3 x 40	49
3 x 48	47
3 x 56	45
4 x 32	46
4 x 36	44
4 x 40	43
5 x 30	43
5 x 32	42
5 x 36	41
5 x 40	38
6 x 30	38
6 x 32	37
6 x 36	36
6 x 40	35
7 x 28	34
7 x 30	33
7 x 32	32
8 x 24	31
8 x 30	31
8 x 32	30
9 x 24	30
9 x 28	28
9 x 30	28
9 x 32	26
10 x 24	26
10 x 30	24
10 x 32	24
11 x 24	21
11 x 28	20
11 x 30	19
12 x 20	24
12 x 22	20
12 x 22	19
12 x 28	18
13 x 20	17
13 x 22	17
13 x 24	15
14 x 20	15
14 x 22	11
14 x 24	10
15 x 18	12
15 x 20	10
15 x 22	8
15 x 24	7
16 x 16	12
16 x 18	8
16 x 20	7
17 x 16	8
17 x 18	4
17 x 20	3
18 x 16	2
18 x 18	2
18 x 20	1
19 x 16	1
19 x 18	13
19 x 20	C
20 x 16	C
20 x 18	E
20 x 20	F
22 x 16	H
22 x 18	J
24 x 14	L
24 x 16	M
24 x 18	N
26 x 14	O
26 x 16	P
28 x 14	R
28 x 16	S
30 x 14	T
30 x 16	V

In some cases it may be desirable to use drills one or even two numbers larger in size.

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